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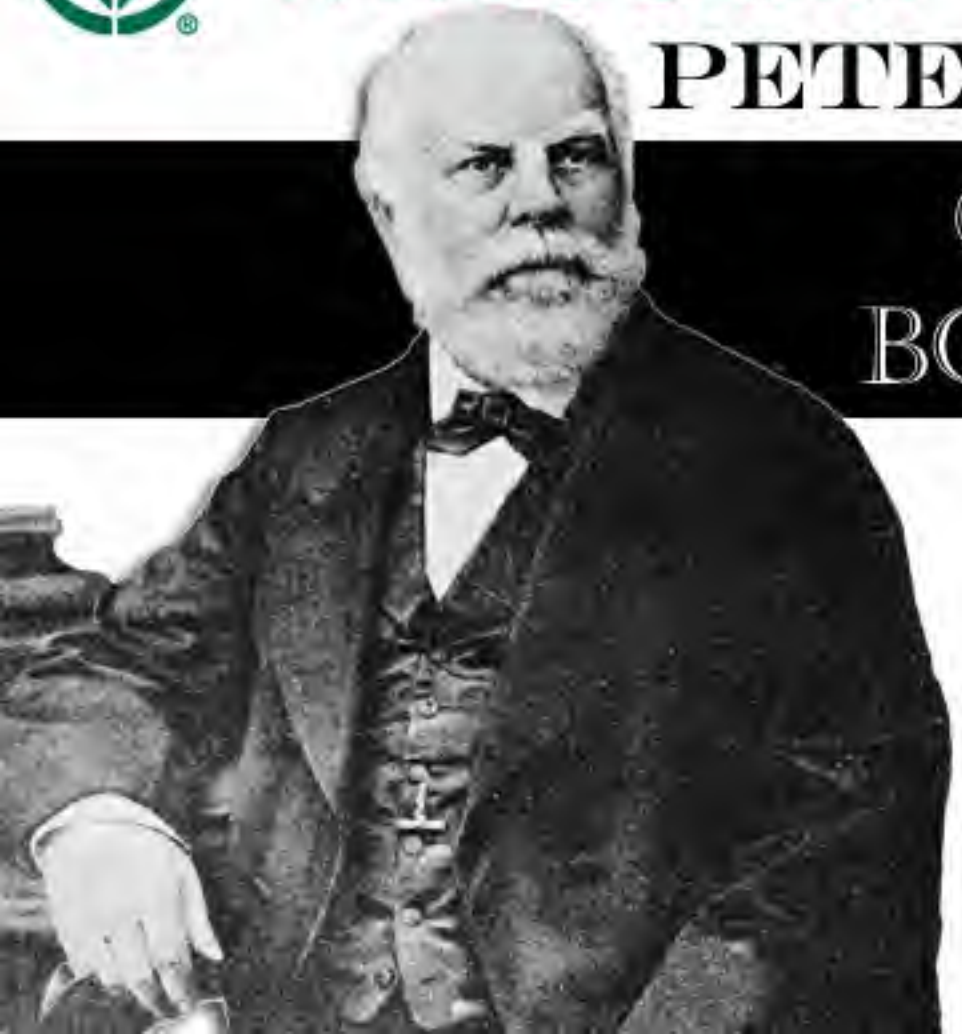

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Cereus Engelmanni. Parry

Salt Lake Desert coll. H. Engelmann. Aug 2d 1859

1 several branches together, each about 4 inches high
half as much in diameter.

12 ribs

12–14 radial spines, 3–4 lines long, white
with dusky tips, lower ones a little longer
than upper ones,

4 central spines upper one about 9, lateral
ones 7, lowest one 10–12 lines long.
Lateral ones directed somewhat upwards

2060

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Echinocereus
2 caespitosus
Texas
Lee XII. 7

scot

2062

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2.
C. dasyanthes
(Apr 1854)
Tab XII.

0.6 (long no albumen.

2063

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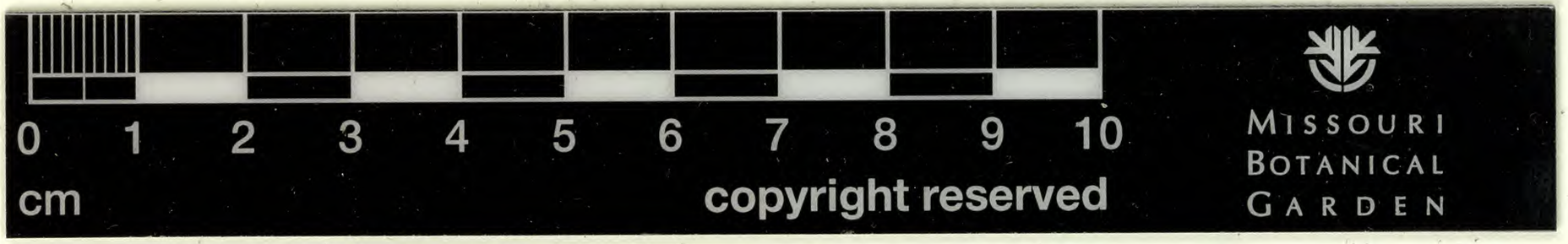

Sept 55
Texas
see XIII. 10

2064

6.

Ceres Leylmani
California
see XIII. 6

7.

C. variegatus
C. pecti-
natus
California
see XIII. 7

8.

C. Berlandieri
Texas
see XIII. 8

bitter

9.

C. pruinosus
Texas
see XIII. 9

position bitter

Ceres tuberosus Roelgen seed 0.4 ± rugose pitted, compressed, carinate; hilum oblong embryo nearly straight, albumen none, cotyledons transverse

Ceres Leylmani Parry seed 0.8–0.7 lg obovate-obovate compressed, carinate on lower part of back – rugose – tuberculate; hilum oblong, with smooth rim.

Ceres pectinatus seed 0.7 lg. obovate-obovate compressed carinate on lower part of back – tuberculated, tubercles ~~sp~~ coalescing running to gether and leaving pits between the ridges – hilum oblong?

Ceres Berlandieri seed 0.5± 0.6 lg. lg subglobose barely compressed, slightly carinate on lower part of back strongly & roughly vermucose; hilum ovate nearly orbicular

Ceres pruinosus seed 0.4 fr hilum to top, 0.5 ± the longest diameter, orbicular compressed, truncate at base with a long linear hilum; vermucose but much less so than C. Berlandieri

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5. Cer. Fendleri
El Paso.
fruit very sparely spinous

6. Sec XII. 8.9.10
C. Fendleri
El Paso.
fruit with many spines

May 1854

seed 0.06 long, albumen none.
cotyledons more developed, than in most other Echinocereï.
seeds pitted; testa brittle
ovule

2065

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Sem. Cart XIII

Echinocerei

March 1856

1. Cer. pectinatus Scheer
" Torreyi Wisl

Seed 0.6 long tuberculate, tubercles similar to those of Cer. respitos XII. 7 but much smaller and slightly keeled — hilum almost obsolete, long

2 From same paper

Seed 0.5 long, more compressed, tubercles small, flattened or hemispherical, carina strong, hilum basilar oblong

Types of the first = same paper, with numbers

C. crassispinus, — long black & white bristles with much grey wool

3. Cer polyacanthus
Albuq
(Fig No III)
Fig 32

Seed is longest diam 0.9 obliquely lenticular much compressed, carinate, somewhat irregularly tuberculate with flat tubercles Hilum subbasilar, small, linear oblong Embryo with a little albumen

4. C. polyacanthus
El Paso
pict No. VI
Fig 33

Seed 0.8 — pretty much same as last, hilum a little more basal, tubercles more irregular, forming holes.

2066

C. paucispinus see XIV. 2

5. Cer. connectanthus
Albuq No. 9.

Seed 0.45 — 0.5 strongly tuberculate — hilum oblong — seed obovate, compressed very similar to XII. 14. — only a little less oblique. (Fig 9 — 12 L. long.)

6. C. Engelmanni
California Party
see VI. 6

Seed 0.6 - 0.7 "' tuberculate — confluent and thereby pitted — obovate very oblique compressed, keeled; hilum basilar, oblong

7. C. variegatus
Colorado
see VI. 7

Seed 0.7 "' tuberculate — somewhat confluent, obovate compressed, carina hilum elliptical —

8. C. Berlandieri
Nuevo
see VI. 8

Seed 0.5 "' strongly and distinctly tuberculate, hilum subbasilar

9. C. procumbens
Matamoros
see VI. 9

Seed 0.45 distinctly but much less strongly tuberculate, — testa smooth compressed, truncate with elongated, oblong basilar hilum

10. C. tuberosus
Rio Grande Valley
see VI. 5

Seed 0.4 pitted-tuberculate, tubercles confluent, forming pits, obovate keeled oblique, Hilum basilar oblong

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Sem. Cact XII

Echinocereei

Febr. 1856

1. C. viridiflorus α
wrightii 1846

Sem 0.5 – 0.6 long obovate subglobose, slightly keeled, tuberculate, tubercles sometimes confluent, Hilum orbicular-oval, basilar.

2. C. viridiflorus β
Wright 1851
probably = Chloranthus

Sem 0.5 obovate compressed, keeled; tubercles confluent so as to exhibit rather the pits between them; Hilum oblong basilar Seed more compressed, hilum longer, keel more distinct, pits rather than tubercles

3. Cer. chlorianthus
wright 1851
№ 40

№ 25

Sem 0.5 or ± longest diagonal diam 0.6 – rounded-obovate, keeled compressed, tubercles confluent so as to exhibit only holes – in all respects same as last!

4 Cer. chlorianthus
wright 1852
№ 68

sem 0.6 – hilum ovate oblong basilar – seed a little larger than the last – but not distinct otherwise

5 Cer. dasyacanthus
El Paso
Pl V. 2

Seed .06. subglobose obovate somewhat compressed, strongly tuberculate; keeled. – Hilum oblong basilar.

6 Cer. conspicuus
minor
Texas

Seed 0.6 obovate, much curved, strongly tuberculate, somewhat keeled, hilum oval basilar.

7 Cer. conspicuus
major
Texas
Pl XIII. 1. 2 &
III. 2

Seed 0.7 strongly tuberculate; slightly keeled, –

2067

8 Cer. Fendleri

Pl V. 5. 6.

Seed 0.6 – 0.7 pitted, somewhat carinate hilum orbicular or somewhat ovl, basilar

9. C. Fendleri
(№ 61)
& 71.

Seed 0.7 pitted, very oblique, curved, hilum oval-ovl – ovl

10 C. Fendleri
№ 62

Seed 0.7. irregularly pitted, much less curved – hilum oblong.

11. C. dubius
№ 55
El Paso

Seed ~~0.6~~ 0.7 globose obovate, oblique tuberculate tubercles somewhat confluent slightly keeled hilum basilar, orbicular

12. C. dubius
(cinerascens)
Chl fig. 68

Seed 0.6 obovate, very oblique, tubercles somewhat confluent; holes – keeled below or back. hilum subbasilar small, orbicular

13 C. stramineus
sem. maj.
(sem 59)

Seed 0.6 – 0.7 l.v. obovate – very oblique, tubercles large, not confluent; – keeled below or back – hilum basilar oblong

14. C. stramineus
sem. min
Chl fig 57

Seed 0.5 obovate, very oblique, exactly like the foregoing, only smaller

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Sem Cact. XIV. Echinocereei March 1856

Rotten

1. Cereus ignotus
(C Paso ?

Sem 0.6 l. long, obovate, somewhat oblique reticulate confluent and thereby pitted. — slightly keeled. Areolæ basilar, oval whitewoolly posteriorly (8 yellow radial 4 dusky central spines) fl. 6-8 C. long. fleshy — Seed № 30. & 67 are identical

2. C. pauci-spinus
(C Paso (№ 26

Sem 0.7 - 0.8 long - obovate, oblique, keeled, tubercles slightly confluent, very irregular. pale elliptic, — basilar
very near XIII. 4, but more elongated, with a larger, browner hilum

3. the same ?
(C Paso 1851
(№ 3)

Sem 0.7 - 0.75 long, obovate, oblique, tubercles distant or usually confluent, rather irregular, hilum oblong, subbasilar. — No name to it but probably the same as last — though hilum very different.

2068

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Missouri Bot Garde

June 5th 1861

Cereus emoryanthus a specimen sent from El Paso in 1851 or 52. flowering for the first time; 4 flowers, two open today, one is past and one bud has not opened yet. 403

Flower 3 inches long, abt 3½ in diameter when fully open; purple, exactly of the Colour of C. Fendleri C. procumbens etc, opening abt 10 o'clock a m. and closing p. m. re opening for seven days.

Ovary oval, about 8-9 lines long; areolae 40-50 each with a subulate deciduous leaf, or sepal which gradually becomes upward more distinct sepals; the lower of these sepals are subulate, very acute, and scarcely one line long, deciduous the upper ones are about 1½ lines long, and broader, somewhat persistent. Tomentum of the areola white short. 10-13 white spines on the areolae, of unequal length and thickness, on the lower areolae about 13 nearly 2 lines long on the upper abt 10, of 2 to 3 or 4 lines long

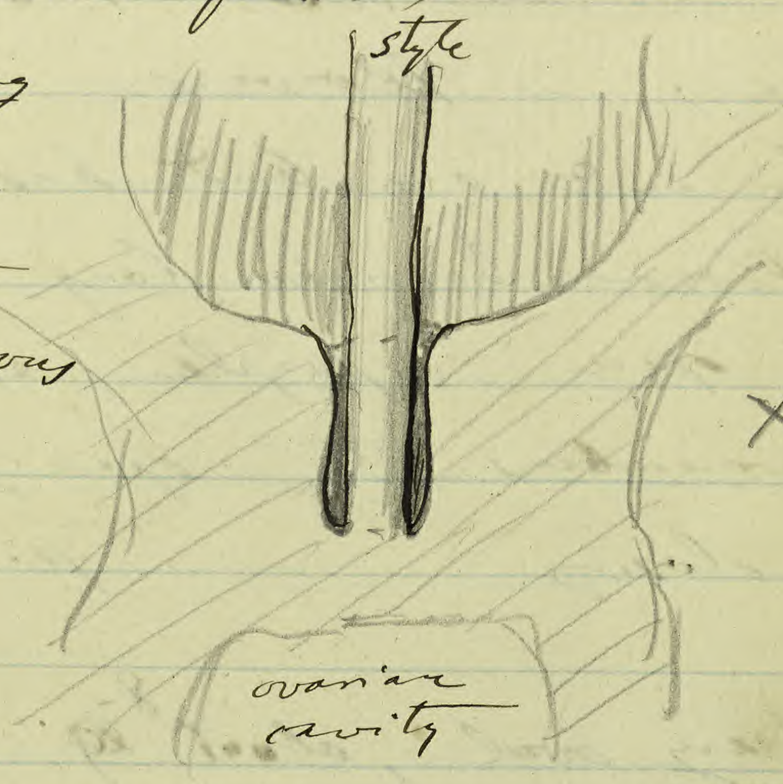
Lowest part of tube contracted, soon widening, with 18-20 triangular green sepals, lower with 8-10, upper often with only 2-3 spines, the latter 6-7 or 8 lines long.

2069

Abt 8 middle sepals have green midrib and petaloid margins, and are shorter than the petals — Abt 5 interior ones are as long as the petals, with brownish midrib and cuspidation.

Petals abt 13, the exterior longer than the inner ones; the former with a mucro, the latter obtuse or even emarginate, all denticulate; petals 7-9 lines wide, and 1¾ inches long

Lowest part of Tube inside for about 2 lines naked and cylindric nectariferous, tube then suddenly widening bearing stamens for about 7 lines; stamens about 6 lines long, very numerous filaments pale red, anthers small yellow. pollen yellow



×4

Style pale yellowish green, stout, 10 lines long; bearing 7 or 8 green stigmata just exsert over the stamens; stigmata spreading, obtuse, 4 or 4½ lines long.

petals ½ inch longer than stamens; much longer than stigmata

Anthers oval $\frac{2}{3}$ line long

Pollen globose, smooth, $\frac{14-}{412}$ line diam.

Ovules numerous, pendulous branching long funicli, 10–25 in one branch, funicli twisted, curved dichotomously divided mostly fibrillose on the inner side; ovule $\frac{1}{6}$ line long, short and broad (digitaliform)

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